



1/14

Scyllatoxin A F C N L R M C Q L S C R S L G L L G K C I G D K C E C V K H

SCY01*	A F C N L R <u>K</u> C Q D K	C E T F G L L G K C I G D K C E C V K
SCY02*	A F C N L D <u>K</u> C S T P	C R I F G L L G K C I G D K C E C V K
SCY03*	A F C N L S <u>K</u> C S T F	C R I I G L L G K C I G D K C E C V K
SCY13	C R L Y K C Q D E(Fm)	C R I I G L L G K C I G D K C E C G
hGH	165C F R K D M D K	V E T F L R I V Q181

FIG. 1

Title: Protein engineering
Inventors: Mark Leslie SMYTHE et al.
Atty .Dkt. No. 065064-0135
Serial No. 09/830,011



2/14

VIB Native A C E N N C R K K Y D I L C I R C Q G K W A G K R G K C A A H C I I Q K N N C K G K C K E
VIB01 A C R K D C D K K E T F C I R C Q G K E A G K D G N C A A A R C I R L H Q L C Z G K C A K E
hGH 65C F R K D M D K V E T F L R I V Q181 11D - N A M I L R A H R L H Q L A F D26

FIG. 2

Title: Protein engineering
Inventors: Mark Leslie SMYTHE et al.
Atty .Dkt. No. 065064-0135
Serial No. 09/830,011



3/14

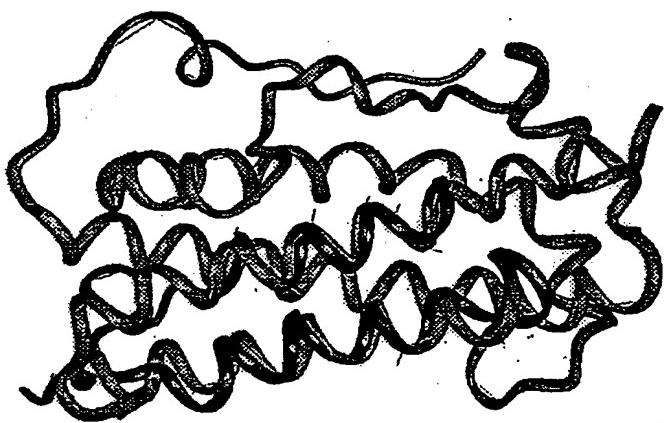


FIG. 3

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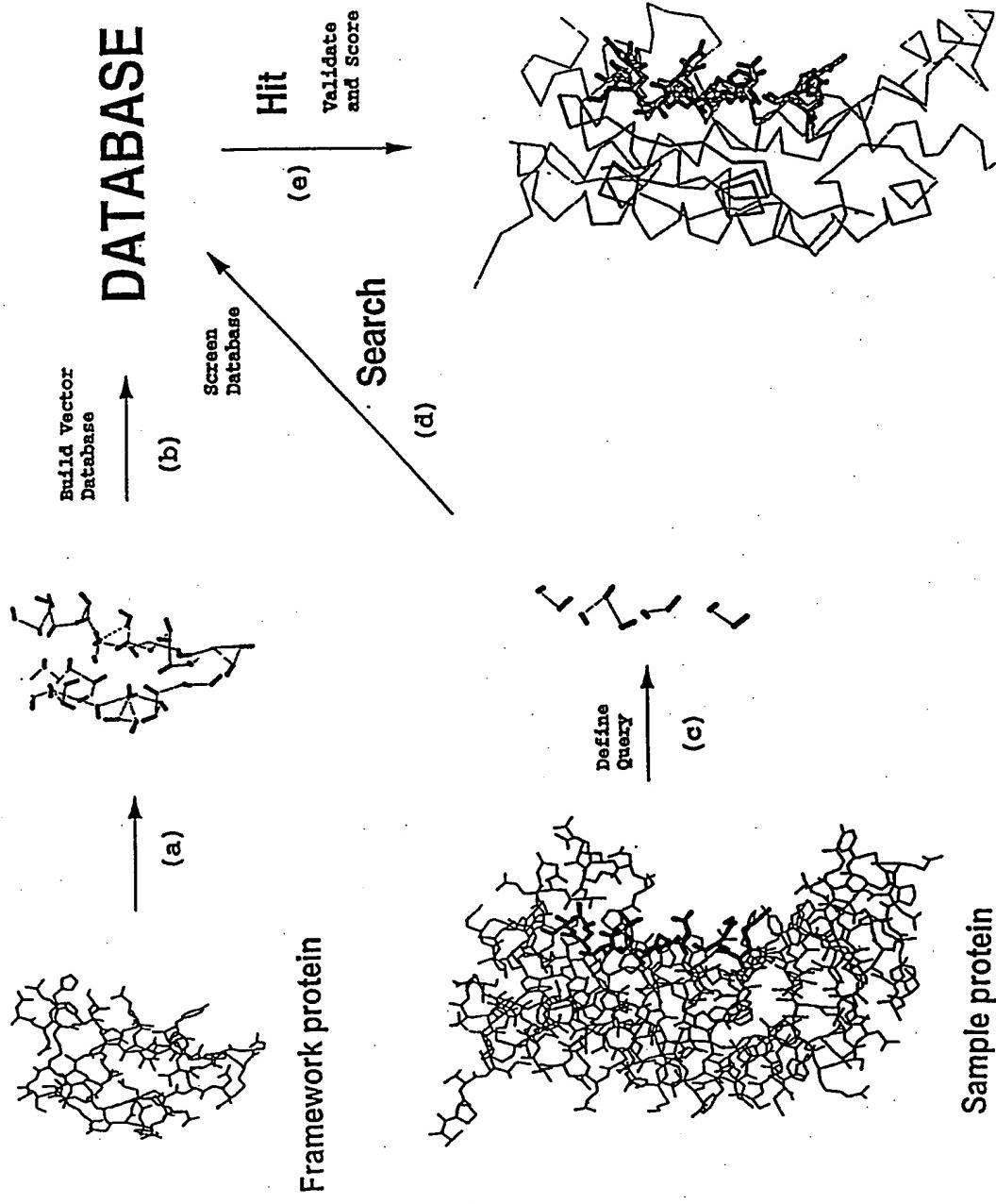


FIG. 4



5/14

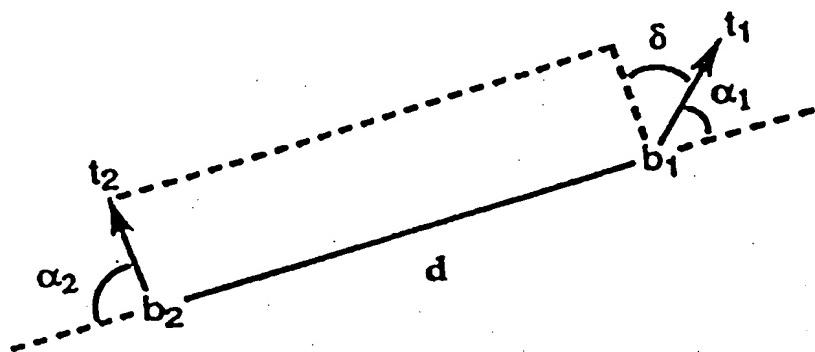


FIG. 5

6/14

REPLACEMENT SHEET



CD Spectra SCY1

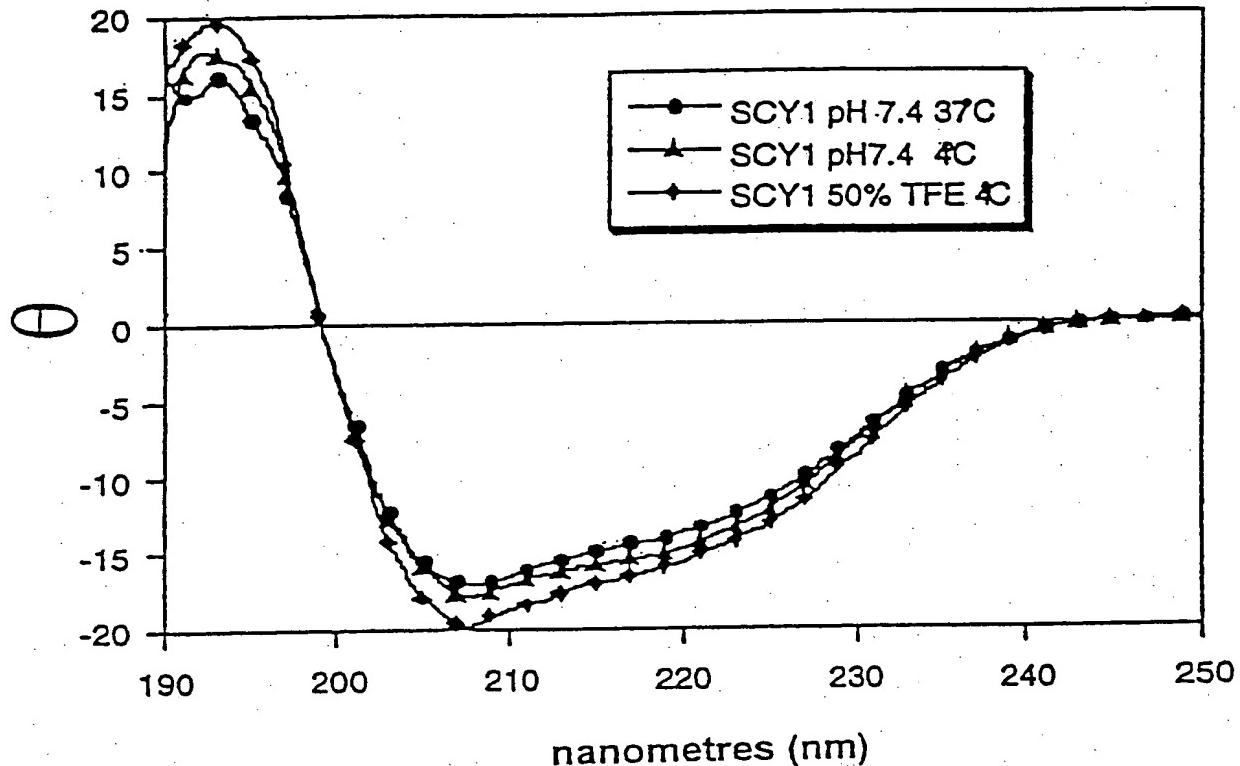


FIG. 6



7/14

Overlay of pdb1scy and GH-SCY0

GH-SCY01

Pdb1scy

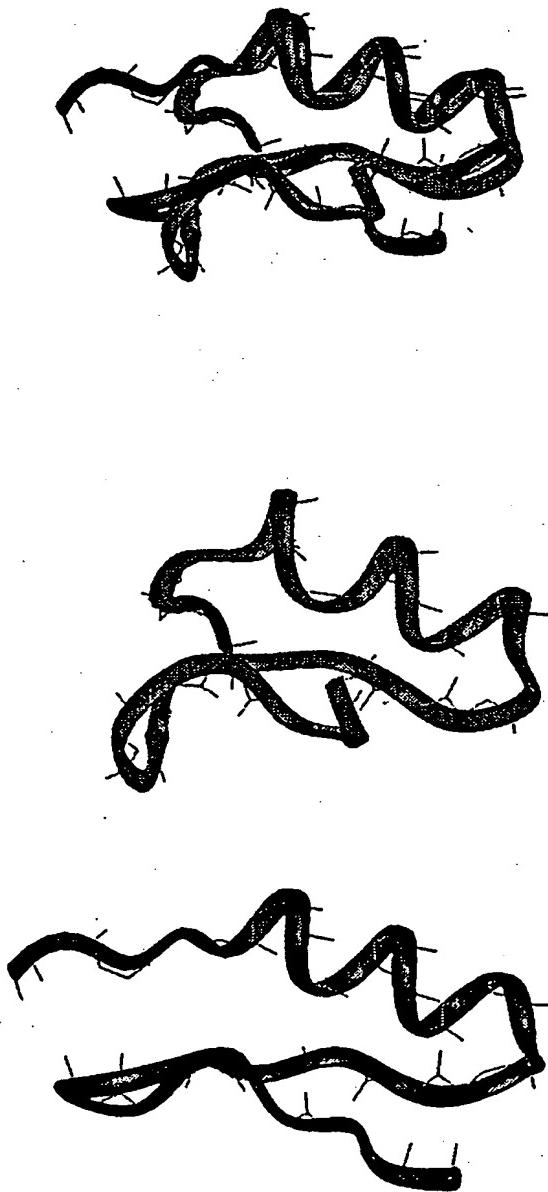


FIG. 7



8/14

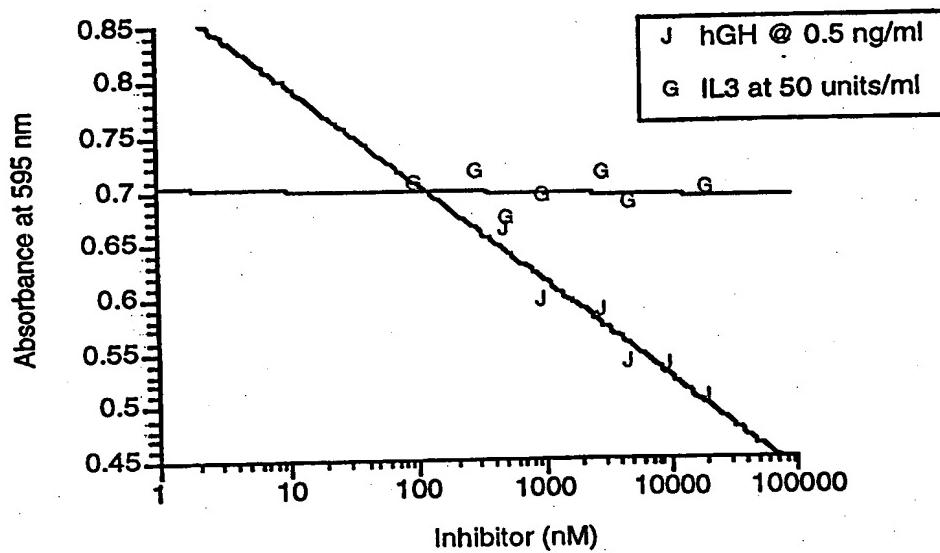


FIG. 8

Title: Protein engineering
Inventors: Mark Leslie SMYTHE et al.
Atty .Dkt. No. 065064-0135
Serial No. 09/830,011



9/14

ZDC F N M Q C Q R R P Y E A L H D P N L N E E Q R N A K I K S I R D D C
ZDC05 F N Y D C Q K D F E E G L Q T P G L N E E R R R N D N I K L R R D E C
hGH 105A S D S N V Y D L L K D L E E G I Q T 123
hGH 1F P P T I P L S R L F D N A M I R A H R L H 21

FIG. 9



10/14

**CD spectra of CML 30
NH₂-VIBO1**

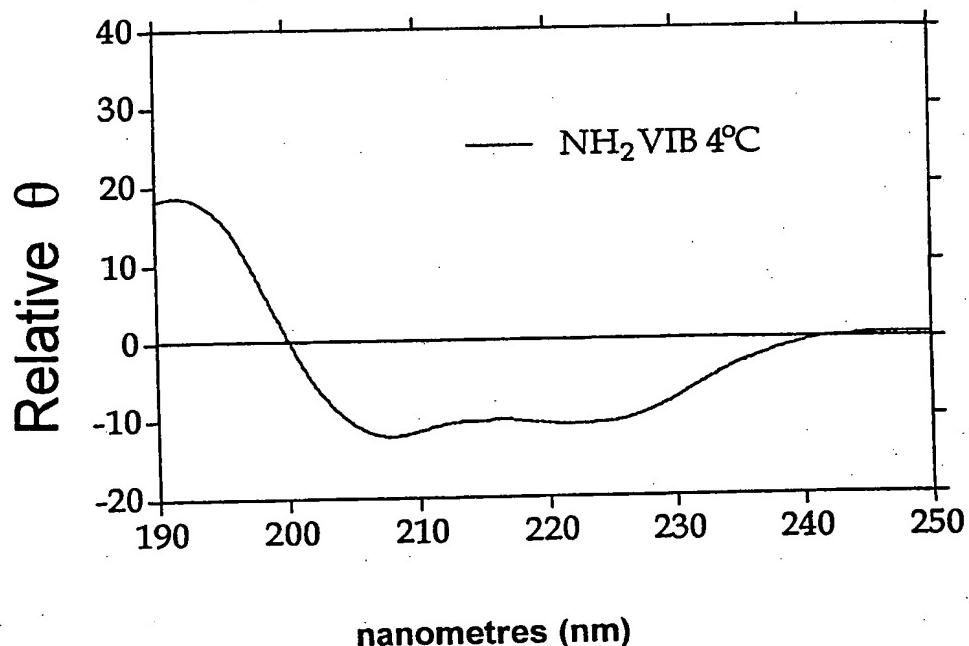


FIG. 10

Title: Protein engineering
Inventors: Mark Leslie SMYTHE et al.
Atty .Dkt. No. 065064-0135
Serial No. 09/830,011



11/14

[REDACTED]

CEQSSALQCN EQGGCHN FCS P E D K P G C L G M V W N P E L C P
DLCEQGALQCGGETFCR I A C S P R D K D N C n L R V H R P A L C A
DLCEQGALQCGGSTFCRT A C S P R D K D N C n L R V D R P A L C A
DLCEQSSALQCN STGCRT F C S P R D B D N C n L R V D R P A L C A
DLCEQSSALQCN STGCRT F C S P R D B D N C n L R V D R P A L C A

173VETPLRI V180-8S RLFDNA MLRAHRL20

hGH

FIG. 11



12/14

CD Spectra ERP03

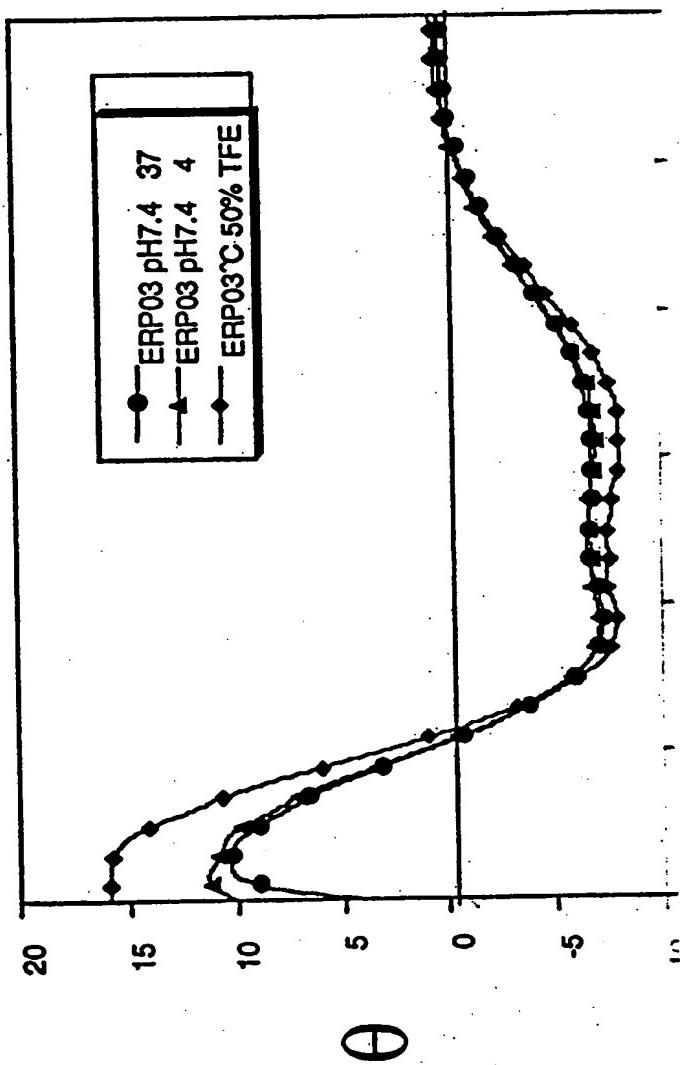


FIG. 12

REPLACEMENT SHEET

13/14

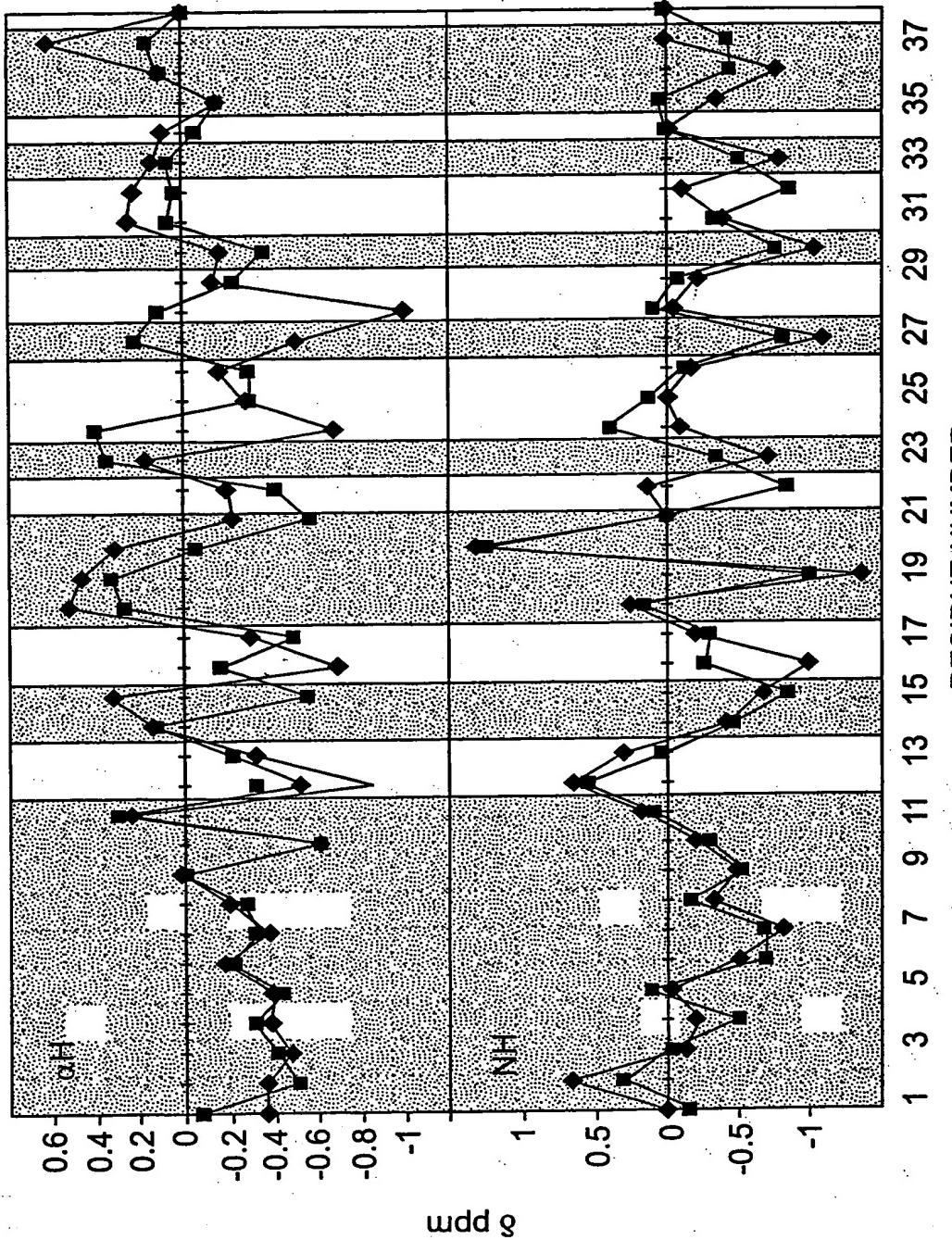


FIG. 13



14/14

T I S C T N P K Q C Y P H C K E T G Y P N A K C M N R K C K C F G R
NH₂-S C S N P K Q C Y P H C K E T G Y P N A Q C Q G S F C T C K G

A F C N L - R M C Q L S C R S - L G L - L G K C I G D K C E C V K H
C N L - A R C Q L S C K S - L G L - X G G C Q G S F C T C G

PTA native
PTA CD4

SCY native
SCY CD4
CD4 Sequence CDR1 LOOP

FIG. 14